across the luminal interface and 4) is concentrated in the lumen, possibly trapped by chemical binding.

In 2 goosefish, U/P ratios for neutral red of approximately 1 were obtained.

Indigo carmine (original dye of R. Hoeber provided by Dr. C. Schmidt) resembled phenol red and chlorophenol red in its transport behavior. In contrast to neutral red, its entry into the lumen was blocked by PAH, diodrast and Benemid. Transport was also blocked by metabolic inhibitors and intracellular tapping occurred with a high potassium, low calcium medium (Puck, Wasserman and Fishman, J. Comparative Physiol. 1952).

In 2 goosefish, U/P ratios for indigo carmine of 13 and 6 were obtained.

These observations on the two dyes illustrate differences in transfer and concentration mechanisms in the isolated flounder tubule.

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On Porosity of Gill Filters and Filtration Rate in Mussels (*Mytilus edulis*)

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Mytilus edulis and other lamellibranchs are able to vary widely the porosity of their gill filters. However, undisturbed mussels living in water that contains only small amounts of suspended material have been found to retain effectively graphite particles of about 1μ. The possibility that undisurbed mussels were able to retain even smaller particles such as protein molecules was investigated. The experiments were made on 3- -4cm long mussels using the technique previously described (C. B. Jorgensen and E. D. Goldberg, Biol. Bull. 105, p. 477, 1953). It was found that the gills were able to retain at most a few percent of dogfish hemoglobin or lobster hemocyanin, stained with T-1824, from a suspension passing the gill filters.

The rate of water transport through the gills under standardized laboratory conditions was independent of the tidal cycle. No significant difference was found between water propulsion in mussels collected from high and low levels of the tidal range. This is contrary to recent findings by Rao (Biol. Bull. 106, p. 353, 1954). In 44 experiments filtration rates varied from 0.8 to 2.1 l./hr./g wet weight of soft tissues at temperatures of 12 - 14°C.